Black Mirror (Netflix) Season 3, 2016. Episode: Nosedive. Shown: Bryce Dallas Howard. *Photo courtesy of Netflix/Photofest.*

ALGORITHMIC INTIMACY,
Prosthetic Memory,
and Gamification in
Black Mirror

By
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Abstract: Black Mirror (2011–current), an anthology science-fiction television series, portrays how digital technologies reflect and shape our dreams and nightmares about the current media environment. The ways in which *Black Mirror* depicts the world where digital devices are strongly tied to human consciousness and bodies can be elaborated by focusing on three keywords: algorithmic intimacy, prosthetic memory, and gamification. There are two major arguments presented. First, *Black Mirror* provides critical perspectives on quantified relationships, artificial memory, and social ratings. Second, at the same time, the ways in which this science fiction text portrays current media environments renders these critical representations of digital technologies ironically normalized.

Keywords: Algorithmic intimacy, *Black Mirror,* gamification, prosthetic memory, science-fiction television

Science fiction can be a barometer of social-cultural-political environments, addressing our fascinations and anxieties about the unknown, the Other, and new technologies (Bould; Sobchack). Since the early 1950s, science-fiction television series have continuously garnered critical evaluations and market success with such shows as *Twilight Zone* (1959–current) and *The Quatermass Experiment* (1953). Early science-fiction television often portrayed images of monsters, aliens, and robots that could be read as metaphors of inhumane agencies, racial differences, and bureaucracy (Jancovich and Johnson). During the 1960s and the 1970s, science fiction in television became more stabilized, with ideologically convoluted liberal and conservative discourses. *The Star Trek* (1966–current) and *Doctor Who* (1963–current) franchises continue to embrace cultural diversity and political tolerance, despite somewhat incoherently also reinforcing other values more in line with a sense of authoritarianism, patriarchy, and imperialism (Wright). Recently, science fiction as a genre has become mainstream, enjoying both market success and awards and nominations at the Oscars (*Arrival, Blade Runner 2049, Her, Inception, Interstellar,* etc.), Emmys, and Golden Globes (*Westworld, Electric Dreams, Sense8, Tales from the*

Loop, The Man in the High Castle, The Handmaid's Tale, etc.).

Praised as *Twilight Zone* for the digital age (Nussbaum), *Black Mirror* (2011–current) is an anthology science-fiction television series that portrays the lures and perils of artificial intelligence, wearable devices, virtual lives, video games, social media, surveillance, predictive analytics, quantified life, and toxic communication. As of 2020, a total of twenty-three episodes (in five seasons and two specials) have been made under Charlie Brooker's production.[1] Many works of science fiction offer fantastical depictions of a distant future (*Westworld, Electric Dreams*), supernatural settings (*Sense8, Tales from the Loop*), or alternate histories (*The Man in the High Castle, The Handmaid's Tale*), all of which speculate upon the conditions of a dystopian world. Compared with other series, *Black Mirror* takes a realistic approach to dystopic themes with a more focused angle. Specifically, it is concerned with media and depicts how digital technologies are saturated and weaponized in mundane lives. Its portrayal of social-media addiction, microchip implants and tracking, and algorithm-based apps is familiar to a contemporary society. One particular episode ("Nosedive") on citizen rating and self-surveillance was released before China's Social Rating became an international issue (CBS; Hvistendhal). As a fable and a critique of the contemporary media milieu, the series touches on timely issues about the ways in which human relationships and consciousness are conditioned by digital devices and technological environments.

Black Mirror reflects and shapes our fascinations and frustrations with the digital media environment. More specifically, the distinction between the real and the artificial is blurred, and accordingly it affects human conditions in the science-fiction show. The reversal of the genuine and the fake has been observed in numerous cultural, artistic, and theoretical tropes, from Plato's cave metaphor to Marx's use-value theory to Walter Benjamin's aura to Borges' fictions to Baudrillard's simulacra. Digital simulations force us to revisit this old question about authenticity, and *Black Mirror* portrays how the real-genuine experiences are transformed by the fake-artificial simulations.

Of the twenty-three episodes in *Black Mirror*, three episodes were chosen for critical analysis based on their examination of the real-fake boundary in notably realistic settings with ordinary characters. Episodes about intelligent machines (e.g., "Be Right Back") and virtual reality (e.g., "San Junipero," "Striking Vipers") were excluded from this analysis due to the overly futuristic assumptions about technologies and the supernatural-fantastical tone. The three episodes chosen for analysis were "The Entire History of You" (season 1, episode 3; "History"), "Nosedive" (season 3, episode 1; "Nosedive"), and "Hang the DJ" (season 4, episode 4; "DJ").

Three keywords were chosen for the depth of analysis: prosthetic memory, gamification, and algorithmic intimacy. Previous scholarly works on "History" episode highlight an issue of organic-

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synthetic memory (Jenkins; Opaza & Faure), which deserves further inquiry. "Nosedive" is similar to "Fifteen Million Merits" (season 1, episode 2; "Fifteen") in that they both satirize media user labor, which has been discussed using the theoretical lenses of gamification (Dragona; Woodcock, and Johnson) and neoliberalism (Elias, Gill, and Scharff; Gill and Kanai). "Fifteen" has been explored using those theories (Johnson), but "Nosedive" has been uniquely studied drawing on panopticism (Allard-Huver and Escurignan) and simulacra (Thomas and Rajan). Critically examining "Nosedive" would facilitate discussions on gamification and neoliberalism with supplementary comments on "Fifteen." Likewise, the episode "DJ" portrays algorithmic calculation as a new condition in relationships (Abad-Santos; Gilbert), and this trope can be more effectively examined using recent scholarly literature on algorithmic culture.

While discussing the ideologies and styles that often appear in the *Black Mirror* universe, each episode is closely tied to memory ("History"), gamification ("Nosedive"), and relationships ("DJ"), but they commonly reflect the ways in which qualitative human conditions are replaced by quantitative measures in a world of automatic calculations. For the depth of analysis of scenes, characters, dialogues, ideologies, and styles, Ted Chiang's short story "The Truth of Fact,

The Truth of Feeling" is also examined as a site for discussion about prosthetic memory and China's Social Rating case for gamification.

Algorithmic Intimacy in a Preemptive World

"DJ" is a parable about dating apps and algorithmic relationships. Frank and Amy live in a world of algorithmic codes. Everyone meets other people, spends a designated time with them, and eventually is assigned a final partner from the recommendations through Coach, a portable matching gadget. Amy and Frank find themselves attracted to one another, but the dating device assigns a different partner to Amy. Nevertheless, Amy and Frank decide to believe in intuition, not in numbers, and choose to escape from the world they live in. When they arrive at the end of the world, it is found that they are avatars in one of a thousand simulations to test their matching, and the avatars visually dissolve into the percentage "99.9%," suggesting a successful matching probability. In the end, the real-life versions of Frank and Amy are in a bar. They check their almost perfect matching rate and approach each other more or less hesitatingly.

Except for the ending sequence, "DJ" only shows the online doubles of "Frank" and "Amy,"[2] who are quantified and simulated versions of the offline Frank and Amy. This final scene can be interpreted openly: the optimistic

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triumph of human free will or the fatalistic determinism of statistical simulation. In the simulation, we see emotional rollercoasters and powerful romances that look vivid and vigorous. In fact, they are constructed fictions generated from metadata (i.e., data about data) from anonymous users who share the same categories of habits, likes, and fears with Amy and Frank. This is an example of measurable types, a sum of "a nexus of different datafied elements that construct a new, transcoded interpretation of the world" (Cheney-Lippold 47).

Here is one whimsical interpretation of the ending scene: Frank might not necessarily need Amy if he finds a 100% match with another woman. It's a classic "boy meets girl" scenario, but in this case what the boy wants is a statistically datafied version of the real girl. For Frank, as long as the date has characteristics of Amy, the actual partner does not matter. This is a hyperreal and postmodern moment, where a copy could be more desirable, and thus more "real" than the real thing. Although the two lovers overcome a harsh test, this humane triumph is conditioned by statistical design.

Furthermore, it seems needless to ask why the couple fit as long as their data are matched well. Dating apps are less about understanding how matching occurs and more about producing good matching outcomes. Hence, predictive analysis is a key component to the matching business, where causality is replaced by correlations in a preemptive condition. The metadata measured by

Back Mirror (Netflix) Season 4, 2017. Episode: Hang the DJ. Shown from left: Joe Cole, Georgina Campbell. *Photo courtesy of Netflix/Photofest.*

Black Mirror (Netflix) Season 4, 2017. Episode: Hang the DJ. *Photo courtesy of Netflix/ Photofest.*

the spontaneous and ubiquitous monitoring of human behaviors and emotions is more central to this process than the knowledge or wisdom based on direct experience and observations about individuals. The categorical sums of Amy's and Frank's characteristics match according to the algorithmic codes in Coach, and that result is accepted sans explanation. This statistical matching works similarly to sentiment analysis, which is often applied in customer service and user analysis. The strategies of sentiment analysis are based on "the displacement of representation by correlation" by "relying on instantaneous and ongoing mechanized monitoring of aggregate flow rather than on discrete analysis of individual responses"

Knowing the simulation result, the real Frank and Amy conveniently accepted a preemptive result, an algorithmically perfect matching.

(Andrejevic, *Infoglut* 50–53). In other words, sentiment analysis means a shift from qualitative human conditions to quantitative measures.

Frank's decision to meet Amy is informed by 1,000 simulated tests based on the virtual "Frank," which is a sum of recorded, categorized, and repurposed parts of the real Frank. Thus, the personal narrative driving the offline Frank is shadowed by the calculated simulations of a thousand virtual Franks. While the real narrative is silenced, the constructed one is detailed. The young couple's love matters in a strategic fiction so that they are only "narrativized when [their] data is algorithmically spoken for" (Cheney-Lippold 41). Consequently, calculating emotions does not only feign vivid experiences but also empty genuine desire.

The preemptively destined couple in this episode of *Black Mirror* are like nowadays consumers who are able to express what they do, feel, and desire through automated algorithms more clearly than ever. Andrejevic (*Automated*) hypothesizes that Amazon can deliver a commodity to one's front door even before that consumer feels a real desire, and the logic behind this preemptive consumption resonates with that of recommendation in the recent algorithmic milieu. Drawing on Lacan and Zizek, Andrejevic (*Infoglut*) argues that algorithmic devices "anticipate desire before it happens—to precipitate an accelerating range of latent desires that

were allegedly 'already there'" (29). This is similar to what "DJ" portrays as the end of human desire: Coach knows me better than I do, expresses what I am before I feel, and fulfills my desire before I dream.

Knowing the simulation result, the real Frank and Amy conveniently accepted a preemptive result, an algorithmically perfect matching. The matching app in *Black Mirror*, similar to real apps such as Tinder and eHarmony, is a relief for those with "optional paralysis," who are afraid of "[t]oo many choices… [t]oo many variables. Too many unpleasantries if things go wrong" (Gilbert). As an information filter, those relationship apps predict outcomes, and in doing so outcomes are effected.

In "DJ," the reality-representation relationship is circular. Vivid and concrete details of reality are translated into data, which is then made to correlate with reality. At the same time, the real vs. data relationship reflects what Andrejevic ("Reflexivity") calls "the logic of pre-emption," which means experience and narratives are displaced by a datafied and automated response. That is, "Frank'" (a measurable type of the real Frank) sees and imagines, even desires, before the real Frank does.

"DJ" portrays an algorithmic society, where people stop desiring before they desire. The end-of-desire logic applies not only to romance but also to revolt. The main characters resist Coach, but their rebellions are scripted, can be skipped, and thus can be institutionalized. While the climactic scene is a moment of protest, it also confirms what Coach prophesizes. In a preemptive world, people can know and imagine, but they cannot desire and act.

Memory Overdose

"History" takes place in a world where people implant Grain behind their ear that allows people to record, browse, replay, edit, and delete what they see and hear. Grain functions like a synthetic extension of organic memory, a personal digital video recorder with a streaming service in one's brain. In the episode, a husband (Liam) suspects that his wife's (Ffion) behavior toward a man named

In an early scene, Liam is asked by security whether he did any illegal activities recently, and he allows his Grain to be scanned rather than tell his own narrative.

Jonas at a dinner party is flirtatious. When the couple return home, Ffion admits she and Jonas briefly dated, but the husband thinks there is more than that. Becoming paranoiac and drunken, Liam scrutinizes Ffion's and Jonas's behavior by Grain redos, demanding Ffion provide more answers. When she denies this, Liam heads to Jonas's house, forces him to replay his memories of Ffion, and finds Jonas's memory of sex with Ffion about 18 months ago, which was about when the couple had a daughter. Back at home, Liam demands that his wife replay the sex with Jonas in their home, finding they did not use a condom. At the ending, left alone in the house, Liam plays back happier redos of the couple, following which he surgically removes the Grain from his ear by himself.

Jenkins examines this episode by incorporating fictional and nonfictional narratives (*Strange Days* and *Cyborg*) in terms of prosthetic memory and wearable computers. Based on McLuhan's notion of the narcissus narcosis, Jenkins claims that "History" questions our fascination with our own mechanically enhanced memory. In this section, Jenkin's arguments and his method of using narratives are extended to reflect on meanings of prosthetic memory from "History."

Criticism of tools replacing organic memory traces back to Ancient Greece,

where Plato writes in the *Phaedrus* that a prosthetic memory device (writing) hurts our organic memory. As the size and speed of digital storage devices has increased in recent years, the paradox of prosthetic memory, which enhances yet collapses minds, has become more pertinent. "History" looks like a digital version of Funes in Borges' short story, where Funes fails to think because he can remember everything he sees, hears, and experiences. Borges writes "[t]o think is to forget differences, to generalize, and to abstract" (137). Under the legacy of Plato and Borges, recent science-fiction texts have continued to question whether memory can be a human condition. In his short story, "The Truth of Fact, the Truth of Feeling," Ted Chiang introduces the Remem, a device integrated into consciousness. It monitors, records, and replays one's experiences. With Remem, we become cognitive cyborgs who cannot misremember.

"History" portrays several cases in which digital memory replaces organic memory. In an early scene, Liam is asked by security whether he did any illegal activities recently, and he allows his Grain to be scanned rather than tell his own narrative. At the dinner party, there is a woman who decides not to implant the prosthetic memory device in order to live in her own memory. She

was with Jonas when he was attacked by Liam. When she called the police to report the incident, they hung up when she said she does not have Grain. As Jenkins writes, individuals may "gain control over [their] own memories at the expense of being taken seriously as a citizen" (49). In a world of prosthetic memory, seeing is not believing—reseeing is.

Discussing the issue of memory, Chiang differentiates "the truth of fact" and "the truth of feeling." The former is external; the latter is cognitive. The former relies on the accurate representation of what actually happened with details as in photorealism; the latter depends on contextual understanding and relational interpretations. "The truth of fact" is about preciseness; "the truth of feeling" is about righteousness. In the end, Liam loses his wife and baby because he was obsessed with precise facts. He earns "the truth of fact,"' but loses "the truth of feeling."

What is stake is a paradox of memory: our obsession with perfect memory meets its emptiness. As Chiang writes, "a perfect memory couldn't be a narrative any more than unedited security-cam footage could be a feature film" (209), and Andrejevic (*Automated*) writes that "a story about everything… would tell us nothing" (34). As fables of

Black Mirror (Netflix) Season 1, 2011. Episode: The Entire History of You. Directed by Brian Welsh. Shown: Toby Kebbell. *Photo courtesy of Netflix/Photofest.*

"History" delivers a timely lesson given recent discussions over the "right to be forgotten" in Europe while also discussing a "future where you don't forget anything," a world that a Google executive imagines.

curses and blessings of perfect memory, "History," Borges's and Chiang's stories commonly touch on total-surveillance society, where everything can be recorded, categorized, and interpreted but omnipresent information fails to deliver meaningful experiences to individual and society. The main characters in the three fables come to have accurate information with a perfect memory (device). The problem is that they are so trapped by details as not to have abstract and critical thinking. Perfect memory is earned by sacrificing sensory experiences, and thinking is hindered by "memory overdose" (Opaza & Faure). Andrejevic (*Automated*) argues that "complete specification does not enhance the subject, it liquidates it" (8).

Google has imagined the future of not forgetting everything (Silverman), and this belief is imbued with a value judgment that accurate and automated recording-storage in machines are better than imperfect and slow human memory. The *Black Mirror* episode points out the limit of this futuristic version. When mechanical redos replace organic memory, there are repetitions but not re-

flections. Selective and partial memory is not necessarily a weakness.

"History" can be read as a moral fable for contemporary people who are overly reliant on prosthetic memories rather than organic ones. Series producer Charlie Brooker mentions how the importance of remembering goes together with the importance of forgetting as the initial idea of "History," which portrays a man slowly killing himself with an obsession with the past, aided by a gadget (Brooker, Jones, and Arnopp). Memory overdosed people are keen at the details, but blind to the big picture. This *Black Mirror* episode is a variation of bounded rationality, in which people are too informed to miss values from imperfect human nature, such as empathy and forgiving. "History" delivers a timely lesson given recent discussions over the "right to be forgotten" in Europe while also discussing a "future where you don't forget anything," a world that a Google executive imagines. In this context, obsessions with perfect memory must meet the virtues of obsolescence, "the solace of oblivion" (Toobin). Those who remember everything cannot think.

Neoliberal Subjects in a Gamified Society

Lacie, the main character in "Nosedive," lives in a world where people evaluate each other using a social rating system. Personal interactions are streamlined in a five-star scale, and the ratings affect people's socioeconomic status, including employment, housing, transportation, and other socioeconomic conditions. Lacie hopes to improve her 4.2 score to 4.5 to qualify for a luxury apartment. When Lacie is invited to the wedding of her childhood friend (Naomi), who has a 4.9, she finds an opportunity to boost her score. Unfortunately, her rating plummets when a series of mishaps occur and, due to her reduced score, Lacie is unable to board the airplane or use a rental car. Knowing Lacie's lateness and low score, Naomi asks her not to come, telling the truth that Lacie was invited as a symbol of ordinariness, authentic friendship, a pure decoration. Frustrated but enlightened, Lacie makes a scene at the banquet.

Consequently, she ends up in jail where she enjoys the feeling of liberation from worrying about her rating.

"Nosedive" is a satire about gamification, "the process of turning something that is not a game into a game" (Dragona 2) to change individual behaviors to be productive and efficient. Another episode of *Black Mirror*, "Fifteen Million Merits" (season 1, episode 2), also uses gamified lifestyle and reality TV as key tropes. In this other episode, people earn virtual credits by watching commercials when their media consumption is translated into currency. Whereas "Fifteen Million Merits" portrays a world of audience labor (i.e., watching as labor), "Nosedive" depicts a world of aesthetic labor (i.e., social-media posting as labor), but both *Black Mirror* episodes imagine conditions of living where our mundane media consumption turns into value creation.

"Nosedive" draws on a digital version of respectability politics, which "reinforce designations of appropriate or inappropriate behavior rooted in structural inequality" (Pitcan, Marwick, and boyd 164–65). The main character of the episode embodies strategies of digital respectability politics, such as adapting to what counts as normative in a world of social-media influencers. Lacie is always vigilant to how her neighborhood, colleagues, and social-media friends see her. She never stops smiling, laughing, and complimenting others, and she consistently posts peppy images and messages on her social-media account (e.g., the picture of her teddy bear doll). It is amazing to see how she can spare her time for her work and house chores if one sees her series of overly positive phatic communications. It is also questionable how genuine her smiles and compliments are; remarking on the character's laugh, Bryce Dallas Howard, who plays Lacie, says she "added 15 per cent fear, 30 per cent disingenuousness, and 25 per cent depression!" (Brooker, Jones, and Arnopp 137).

As a low-status individual, the heroine does what Goffman means by self-presentation, especially concerning how low-class individuals portray themselves (e.g., pretending to be high-

culture consumers) in the hopes of being uplifted in a social ladder. Critical media scholars coined the term *aesthetic labor* to explore the ways in which online users emphasize positive moods and optimistic attitudes, especially in the area of beauty products, fashion, food, decoration, and health (Elias, Gill, and Scharff; Gill & Kanai).

The heroine of "Nosedive" engages in diverse forms of aesthetic labor as she spends her time and energy taking cute photos and uploading feel-good postings. In a café seen in the early part of the episode, she decorates her coffee and cookie to take a picture that her followers might like. She nibbles the cookie and sips the coffee, but she does not seem to enjoy them. Lacie is more interested in presenting her experience than in cherishing it. Post first, experience later (or never). Her aesthetic labor is mixed with self-presentation and authenticity. When Lacie posts a picture of her teddy bear, the image is meant to provoke a sense of childhood, and Lacie successfully valorizes it when the posting bumps up her scores. The teddy bear becomes a moment for Lacie to reconnect with her old friend Naomi because they both share keen interest in decoration, diet, and healthy food. In a scene where they have a video chat, Naomi is doing yoga, and Lacie is cooking a healthy meal. When they begin to talk about Naomi's wedding, they never stop shouting, cheering, and laughing. Their overjoy is strategic; Lacie needs Naomi's invitation for boosting her rating, and the bride wants her old pal as a symbol of innocence, just like a teddy bear.

Two of the key elements to social-media posts are genuineness and authenticity, and these qualities are unintuitively often achieved through planning, staging, and scripting. This seemingly ironic but likely qualities of online presentation fits with the nature of the heroine. Joe Wright, the writer of "Nosedive," imagines Lacie as a likable character who wants to be loved and, thus, audiences can easily identify with her (Brooker, Jones, and Arnopp 143). She is genuine and vulnerable, but also strategic and ambitious. Lacie is consulted by an expert, who says "Just be you.

Black Mirror (Netflix) Season 3, 2016. Episode: Nosedive. Shown: Bryce Dallas Howard. *Photo courtesy of Netflix/Photofest.*

Authentic gesture, that's the key." His advices sound contradictory in that the "authentic gestures" are to be performed to raise her credit scores by decorating her life bigger than real, by boosting her social-media likes numbers, and by connecting to high-rating people.

Practices of self-transformation (e.g., makeover shows) align with neoliberalism, a systemic ideology that individual well-being and success can be best improved by "liberating entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights" (Harvey 2). Female users often work under less or no pay with expectations to produce social capital, the currency in emotional capitalism, which is coupled with ideas of self-care, aesthetic labor, and "beauty politics in neoliberalism" (Elisa, Gill, and Scharff 22). Practices and strategies of aesthetic labor resonate with those of neoliberal subjects, who are continuously advised, requested, and sometimes enforced to present themselves as authentic, real, and ordinary (Duffy).

Just like Grain, the memory device in "History," an eye gadget is implanted in the citizens in "Nosedive," and they can see others' ratings so that they are vigilant about rating control. In a world of "ubiquitous personal rating" (Third and Domingue), people are automatically interpellated and engaged in self-pre-

sentation and self-surveillance. Lacie is seemingly respectful to and observant about others, yet her attitudes and behaviors are very much strategic in order to impress herself on others effectively so that she could climb up a social ladder. She is an entrepreneur who sells excessively optimistic, confident, and relatable images of herself, which is nothing but a brand. Here, self-surveillance meets self-branding. Employing diverse tactics of impression management, the heroine in "Nosedive" embodies a neoliberal subject who is monitoring real and imaginary eyes of the others. The mode of self-surveillance aims to optimize products of individuals' aesthetic labor so that the neoliberal subjects can construct their images to appeal to

Lacie is more interested in presenting her experience than in cherishing it. Post first, experience later (or never).

Black Mirror (Netflix) Season 4, 2017. Shown: Cristin Milioti. *Photo courtesy of Netflix/ Photofest.*

imaginary audiences, like family, peers, and employers (Duffy and Chan).

The main character's journey can be read as an allegory about neoliberal subjects in a gamified society. By committing herself to consistent self-branding and mutual rating, Lacie becomes a brand "to maximize the self as a project" (Weber 227). "Nosedive" seems realistic not only because it depicts how our lives are gamified so as to be translated in to a measurable type or a data template (Cheney-Lippold) but because its plot is based on technologies, which are available or in use now. Watching this episode even seems surrealistic in that it looks similar to what has been already occurring: a rating society. The follow-

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ing section will discuss how gamification affects our lifestyles with a recent Chinese social rating system.

China's Social Credit System

When the main character of "Nosedive" could not purchase a plane ticket due to her low rating, it was not just a fictional situation. In 2018, four million people in China were blocked from purchasing high-speed train tickets due to low social scores (VICE news). Using total surveillance tools such as facial recognition and behavior monitoring, the Chinese government introduced the Social Credit System (*Zhima*) in 2014, aiming to collect searchable data from 1.4 billion citizens in the near future (Mitchell and Diamond). As of 2020, local governments manage their own systems, and there is no centralized system. There are, nevertheless, fears of a police state and an authoritarian turn in China (Mozur and Krolik) as the government and private institutions have linked up, and a networked and nationwide database is expected in the future (Kobie).

Of many systems, the Zhima (= Sesame) credit score is noticeable. Developed by Ant Financial in 2015, Sesame Credit (ranging from 350 to 950) was adopted by Alipay and WeChat, two major Chinese apps. Just like the rating in "Nosedive," this credit is calculated using people's everyday routines.

The score increases as a user performs "good" behaviors (e.g., buying diapers, disposing of garbage properly), and decreases as the user performs "'bad" behaviors (e.g., jaywalking, littering, spreading unchecked rumors) (Hvistendhal; Mitchell and Diamond).

As a surveillance technique, this gamification system benefits those with high scores via rewards such as housing loans, travel, school, jobs, and utility billing. People with high scores can check into hotels and rent cars without a deposit. One Shanghai hospital allows users with a score above 650 to see a doctor without waiting. Online dating venues give better visibility to users with higher scores, and on Circles, Alipay's dating app, only male users with 750 or higher scores can comment on women's posts (Rollet). However, there are also more serious concerns. Those with low scores are limited in using planes, trains, real estate, cars, and even high-speed Internet (CBS). In the city of Suzhou, 200 points are deducted when users are found to have posted false product reviews, evaded utility bills, or missed a hotel booking (Rollet).

Sesame Credit is computed using not only users' behaviors, but also those of their friends. One can lose points in their rating due to a friend's low score. Likewise, in "Nosedive," one of Lacie's colleagues is bullied and struggled with a plummeted score. When she feels bad for him and gives him a positive rating out of pity, she is not just warned by her colleague, but she also receives negative ratings. The side effects of a rating system as a digital social ladder could thus be social segregation, increasing exclusiveness and promoting a new digital divide.

Combining financial and political metadata into a super app could deepen a government's control over its citizens, thereby weakening civil society. The Chinese government published the names of political activists, and as a result, they came to be restricted in private and public services. One Chinese journalist was banned from traveling and using hotels after reporting on suspicious dealings by Chinese politicians (Hvistendhal). The Chinese government

also announced a measure to ban the blacklisted citizens from social gatherings (Rollet).

Notably, other user rating systems that are limited to one app (e.g., Uber, Yelp) are becoming more common. The fictional and the nonfictional rating systems are based on user aesthetic labor, expanding ideas and practices to diverse aspects of life. And although they are technically opt-in, they are admittedly, realistically mandatory.

Discussions and Conclusions

There are two worlds that conflict and exist in parallel in these *Black Mirror* episodes. One is automatically recorded ("History"), statistically rated ("Nosedive"), and algorithmically simulated ("DJ"). The other is filled with specific human activities and existences in the forms of organic memories ("History"), diets and exercises ("Nosedive"), and physical intimacy ("DJ"). The first type is measurable, with little room for the messiness of lived experience; the second type is unquantified, with ample room for human mistakes. Our current society is experiencing the first type of lives (i.e., the fake) more and the second type (i.e., the genuine) less.

The transition to a more automated society must embrace ubiquitous surveillance and complete databases of the "truth of fact," which belittles vivid human experiences and memories because they are incomplete, partial, and subjective. This bias of algorithm prefers the metadata versions of everyday life to representational narratives. What is expected to happen in the future is a society full of ratings and simulation, not much of experiences and narratives. What is at stake here is that people are deprived of the capacity to make sense of their lives. Experiences and narratives are by nature selective, framed, and subjective. People can think deeply in abstraction, which is to rule out specifics and sensorium particular. Perils occur when the dreams of full memory ("History"), total gamification ("Nosedive"), and a preemptive relationship ("DJ") underestimate such human con-

ditions as forgetting, genuineness, and vivid relationships.

Black Mirror simultaneously criticizes techno-utopianism and welcomes a world of gamification. The series is a battleground between optimistic and skeptical perspectives in portraying problems, concerns, and challenges of digital culture: that is, mostly on the thematic level. On the stylistic level, however, the ways in which the episodes depict near future society are resonating taken-for-granted images about digital media. This television series is timely in touching on possible consequences of wearable technologies, neoliberal subjects, and quantifiable relationships. But it is shy of questioning more fundamental assumptions behind infrastructure. The starting point of the show accepts rather than problematizes its very assumptions. Consequently, the overall tone leans toward nihilism—the notion that one cannot avoid technological development.

Another point worth noting is the drama's convoluted plot structure, which is not exclusive to *Black Mirror*, rather a cliché in recent science-fiction texts. Plot twists, reversals, conspiracy narratives, and counter narratives might be trapped by "the paradox of generalized savviness: it is impossible to take a stance that debunks all representations" (Andrejevic, "Reflexivity" 170). The seduction of the science fiction genre lies at a double logic of debunking and endorsing myths of new technologies. Experiences of watching *Black Mirror* warn us against a ubiquitous and always-on media landscape and, at the same time, invite us to participate in the same environment. People are supposed to be enlightened about dangers of "dataveillance" in most *Black Mirror* episodes, but what they remember is likely gadgets for perfect memory ("History"), peer rating systems ("Nosedive"), and relational matching ("DJ"). In other words, although the audiences problematize these issues, they end up accepting these ideas.

Black Mirror is a cultural barometer of the contemporary media landscape. The series renders critical inquiries upon the encroaching digital world, yet

Experiences of watching *Black Mirror* warn us against a ubiquitous and always-on media landscape and, at the same time, invite us to participate in the same environment.

its thematic insights might be weakened by the very styles that depict it. Here, it would be worth reminding viewers of Lazarsfeld and Merton's notion of the narcotizing dysfunction of mass media, whereby exposure to media content may anesthetize rather than energize audiences. Lazarsfeld and Merton warn against mass media because audiences often mistake knowing as acting. Watching *Black Mirror* could be experiencing narcotizing dysfunction of digital media, if tech-savvy audiences acknowledge nightmares of current technological environments, but their novel insights end up with skepticism against any social-political-communal actions. These seemingly enlightened citizens might accept algorithm, prosthetic memory, and gamification as new digital destinies rather than avoidable dystopias.

NOTES

1. In a 2020 interview, Brooker expressed his hesitation to continue the *Black Mirror* series, saying "I don't know what stomach there would be for stories about societies falling apart" (Morris).

2. The distinction between datafied and quantified "person" and genuine and natural person is borrowed from Cheney-Lippold.

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